

REMARKS

Twenty-six claims were originally filed in the present Application. Claims 11-18 were subsequently withdrawn due to a restriction requirement. Claims 1-10 and 19-26 currently stand rejected. Claims 1, 19, and 22 are amended herein. Reconsideration of the Application in view of the foregoing amendments and following remarks is respectfully requested.

35 U.S.C. § 102(b)

In paragraph 3 of the Office Action, the Examiner rejects claims 1-4 and 6-8 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,635,754 to Strobel et al. (hereafter Strobel). The Applicants respectfully traverse these rejections for at least the following reasons.

“For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be *identically* shown in a single reference.” *Diversitech Corp. v. Century Steps, Inc.*, 7 USPQ2d 1315, 1317 (CAFC 1988). The Applicants submit that Strobel fails to identically teach every element of the claims, and therefore does not anticipate the present invention.

Regarding the Examiner’s rejection of independent claim 1, Applicants respond to the Examiner’s §102 rejection as if applied to amended independent claim 1 which now recites an “*electronic circuit device coupled to the x-ray shielding layer, said x-ray shielding layer obstructing a line-of sight path to said electronic circuit device from a localized external x-ray source,*” which are limitations that are not taught or suggested either by the cited reference, or by the Examiner’s

citations thereto.

Strobel teaches completely enclosing an integrated circuit inside of a high-Z closed container to protect from external radiation. In particular, Strobel teaches “[a] rectangular lid 570 having a length and width substantially similar to that of the base 510 is secured to the base 510 to enclose and protect the die 580 within” (column 7, lines 54-56). In contrast, Applicants’ claimed configuration does not result in a completely closed container, and need not be uniformly constructed of high-Z material.

On page 3 of the Office Action, the Examiner concedes, with regard to the teachings of Strobel, that “the reference does not mention x-rays” Applicants concur. Applicants therefore submit that Strobel nowhere teaches “a x-ray shielding layer” that protects an electronic circuit device from x-rays emitted by “a localized external x-ray source”, as recited by Applicants in claim 1.

On page 3 of the Office Action, the Examiner cites paragraph 35 of Applicants’ Specification as support for analogizing the base and lid of Strobel’s radiation shielded package to Applicants’ “x-ray shielding layer”. The Examiner states that “this material is one of the materials applicants has mentioned that could be used to form the shielding layers.” Applicants submit that paragraph 35 discusses only Applicants’ claimed “radiation shielding top” and “radiation shielding bottom”, but does not pertain to Applicants’ claimed “x-ray shielding layer”. Applicants therefore respectfully submit that Strobel nowhere teaches “a x-ray shielding layer” implemented as protection from x-rays emitted by “a localized external x-ray source”, as recited by Applicants in claim 1.

Regarding the Examiner's rejection of dependent claims 2-4 and 6-8, for at least the reasons that these claims are directly or indirectly dependent from respective independent claims whose limitations are not identically taught or suggested, the limitations of these dependent claims, when viewed through or in combination with the limitations of the respective independent claims, are also not identically taught or suggested. Applicants therefore respectfully request reconsideration and allowance of dependent claims 2-4 and 6-8 so that these claims may issue in a timely manner.

In addition, Strobel specifically teaches that "[b]oth the base 510 and the lid 570 are constructed from a high-Z material" (column 7, lines 62-63). In dependent claim 7, Applicants explicitly recite that "the radiation shielding top comprises a high Z material and a low Z material." Applicants therefore submit that Strobel fails to anticipate the limitations of claim 7.

Because a rejection under 35 U.S.C. §102 requires that every claimed limitation be *identically* taught by a cited reference, and because the Examiner fails to cite Strobel to identically teach or suggest the claimed invention, Applicants respectfully request reconsideration and allowance of claims 1-4 and 6-8 so that these claims may issue in a timely manner.

35 U.S.C. § 103

In paragraph 5 of the Office Action, the Examiner rejects claims 5, 9, and 10 under 35 U.S.C. § 103 as being unpatentable over Strobel. The Applicants respectfully traverse these rejections for at least the following reasons.

Applicants maintain that the Examiner has failed to make a *prima facie* case of obviousness under 35 U.S.C. § 103(a) which requires that three basic criteria must be met, as set forth in M.P.E.P. §2142:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The initial burden is therefore on the Examiner to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Regarding the Examiner's rejection of dependent claims 5, 9, and 10, for at least the reasons that these claims are directly or indirectly dependent from respective independent claims whose limitations are not identically taught or suggested, the limitations of these dependent claims, when viewed through or in combination with the limitations of their respective independent claims, are also not identically taught or suggested. Applicants therefore respectfully request reconsideration and allowance of dependent claims 5, 9, and 10, so that these claims may issue in a timely manner.

Furthermore, with regard to claim 5, the Examiner concedes that Strobel nowhere teaches “expressly disclosing the second thickness is greater than the first thickness.” Applicants concur. However, the Examiner fails to provide any further references to support the rejection of claim 5. In addition, with regard to claims 9 and 10, the Examiner also concedes that Strobel nowhere teaches “expressly disclosing the space ring being a high (or low) Z material.” However, the Examiner again fails to provide any further references to support the rejection of claims 9 and 10.

In the rejections of claims 5, 9, and 10, it appears that the Examiner is utilizing Official Notice without expressly stating so. Applicants respectfully submit that the limitations of claims 5, 9, and 10 would not have been obvious to one skilled in the art at the time of the invention. Applicants therefore request the Examiner to cite specific references in support of these rejections, and failing to do so, to reconsider and withdraw the rejections of claims 5, 9, and 10, so that these claims may issue in a timely manner.

Furthermore, the Court of Appeals for the Federal Circuit has held that “obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination.” In re Geiger, 815 F.2d 686, 688, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). Applicants submit that there is no teaching of a combination that would result in Applicants’ invention, and therefore the rejections of claims 5, 9, and 10 under 35 U.S.C §103 are not proper. Applicants therefore respectfully request the Examiner to cite references in support of the

Official Notice, and to also indicate where an explicit teaching to combine the cited reference may be found.

In addition, Applicants submit that claim 5 recites “*wherein the second thickness is greater than the first thickness because said radiation shielding top is designed to attenuate said radiation and said x-ray shielding layer is designed to attenuate said x-rays,*” which are limitations not disclosed in the cited reference.

For at least the foregoing reasons, the Applicants submit that claims 5, 9, and 10 are not unpatentable under 35 U.S.C. § 103 in view of the cited references, and that the rejections under 35 U.S.C. § 103 are thus improper. The Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 5, 9, and 10 under 35 U.S.C. § 103.

In paragraph 6 of the Office Action, the Examiner rejects claims 19-26 under 35 U.S.C. § 103 as being unpatentable over Strobel in view of U.S. Patent No. 6,118,184 to Ishio et al. (hereafter Ishio). The Applicants respectfully traverse these rejections for at least the following reasons.

Applicants maintain that the Examiner has failed to make a *prima facie* case of obviousness under 35 U.S.C. § 103(a) which requires that three basic criteria must be met, as set forth in M.P.E.P. §2142:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation

of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The initial burden is therefore on the Examiner to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Applicants respectfully traverse the Examiner's assertion that modification of Strobel according to the teachings of Ishio would produce the claimed invention. Applicants submit that Strobel in combination with Ishio fail to teach a number of the claimed elements of the present invention. Furthermore, Applicants also submit that neither Strobel nor Ishio contain teachings for combining the cited references to produce the Applicants' claimed invention. The Applicants therefore respectfully submit that the obviousness rejections under 35 U.S.C §103 are improper.

Regarding the Examiner's rejection of independent claim 19, Applicants respond to the Examiner's §103 rejection as if applied to amended independent claim 19 which now recites "*wherein the thickness of the x-ray shielding layer is selected to shield the first circuit die from receiving an amount of x-rays greater than the total dose tolerance of the first circuit device, said x-rays being emitted from a localized external x-ray source,*" and which further recites "*wherein the thickness of the second radiation shielding tub is selected to shield the circuit die from receiving an amount of x-rays greater than the total dose tolerance of the second circuit device, said x-rays being emitted from said localized external x-ray source,*" which are limitations that are not taught or suggested either by the cited references, or by the Examiner's citations thereto.

As discussed above in connection with claim 1, Applicants submit that Strobel nowhere teaches selecting the thickness of an “x-ray shielding layer” to protect an electronic circuit device from x-rays emitted by “a localized external x-ray source” as now recited in amended claim 19. The foregoing arguments made with respect to claim 1 apply equally to independent claim 19, and are hereby incorporated by reference.

With respect to claim 19, the Examiner concedes that Strobel fails to disclose “a second circuit die with corresponding shielding layers”. Applicants concur. The Examiner then point to Ishio to purportedly support the rejection of claim 19. Ishio merely teaches “a semiconductor device including two semiconductor chips” (see Abstract). Ishio nowhere discusses or mentions x-rays. Applicants therefore submit that neither Strobel nor Ishio teach selecting the thickness of an “x-ray shielding layer” to protect an electronic circuit device from x-rays emitted by “a localized external x-ray source” as now recited in amended claim 19.

Regarding the Examiner’s rejection of dependent claims 20-26, for at least the reasons that these claims are directly or indirectly dependent from respective independent claims whose limitations are not identically taught or suggested, the limitations of these dependent claims, when viewed through or in combination with the limitations of the respective independent claims, are also not identically taught or suggested. Applicants therefore respectfully request reconsideration and allowance of dependent claims 20-26 so that these claims may issue in a timely manner.

Also with regard to claims 19-26, the Examiner concludes that “[t]herefore, it would have been obvious to one in the ordinary skill in the art at the time of the invention to make the chip of the Strobel’s structure in a device along with other chips . . . in order to make the structure usable in a device that use a plurality of chips” Applicants respectfully submit that a *general restatement of the advantages disclosed by the Applicants* deriving from implementation of the present invention cannot act as the required teaching or suggestion to combine cited references for a proper rejection under 35 U.S.C. § 103. Courts have repeatedly held that “it is impermissible . . . simply to engage in *hindsight reconstruction* of the claimed invention, using the Applicants’ structure as a template and selecting elements from references to fill in the gaps.” In re Gorman, 18 USPQ 1885, 1888 (CAFC 1991).

For at least the foregoing reasons, the Applicants submit that claims 19-26 are not unpatentable under 35 U.S.C. § 103 over Strobel in view of Ishio, and that the rejections under 35 U.S.C. § 103 are thus improper. The Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 19-26 under 35 U.S.C. § 103.

Summary

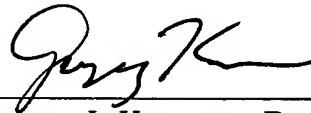
Applicants submit that the foregoing remarks and amendments overcome the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a). Because the cited references, or the Examiner's citations thereto, do not teach or suggest the claimed invention, and in light of the differences between the claimed invention and the cited prior art, Applicants therefore submit that the claimed invention is patentable over the cited art, and respectfully request the Examiner to allow claims 1-10 and 19-26 so that the present Application may issue in a timely manner. If there are any questions concerning this amendment, the Examiner is invited to contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,

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